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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,376	04/03/2006	Jens Mertens	25687105081	2253
28886	7590	09/17/2007		
CLARK HILL, P.C. 500 WOODWARD AVENUE, SUITE 3500 DETROIT, MI 48226			EXAMINER SHALLENBERGER, JULIE A	
			ART UNIT	PAPER NUMBER
			2885	
			MAIL DATE	DELIVERY MODE
			09/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/574,376

Applicant(s)

MERTENS, JENS

Examiner

Julie A. Shallenberger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roney (5,632,551).

In regard to claims 1, 12, 13, 14, and 17, Roney teaches a lighting element comprising diodes 12 (claim 17), and inserted light guide body 16, arranged in front of the diodes in the direction of the light exit wherein the diodes are connected to the inserted light guiding by injection molding a resin, at least 50 percent of the surface of the diodes are covered by the injection molded resin, but lacks the teaching of the resin being a transparent plastic with a maximum wall thickness that does not exceed three times the minimum wall thickness.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the maximum wall thickness not exceed three times the minimum wall thickness (claim 1) and having the maximum wall thickness less than three times the minimum (claims 13 and 14), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only ordinary skill in the art. *In re Aller*, 105 USPQ 233.

Furthermore, Roney teaches injection molding an epoxy (thermosetting epoxide polymer) resin which is a polymer and therefore also a plastic. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the plastic transparent in order to facilitate the propagation of light in the lighting element.

In regard to claims 2 and 15, Roney teaches the invention described above, and the lower edge of the transparent plastic engages radially around the surface of the light-emitting diode ends below a plane, which runs normal to the centerline of the diode and through the center of gravity of the light-emitting chip of this diode.

In regard to claims 3 and 16, Roney teaches diode and the inserted light-guiding body are located on a common centerline, wherein the centerline runs through the center of gravity of the light-emitting chip of the diode such that they are coaxial (claims 16 and 18).

In regard to claim 4, Roney teaches that the lighting element is made of several individual lighting elements arranged adjoining to one another.

In regard to claim 5, Roney teaches that the centerlines of the individual lighting elements are arranged parallel to one another.

In regard to claims 6 and 19, Roney teaches that the inserted light-guiding body includes a concave recess(es) towards the diode(s).

In regard to claim 11, Roney teaches the luminescent diodes are fixed on a circuit board 20 before the coating by injection molding.

Claims 7, 8, 20, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roney in view of Servizawa (4,733,335).

Roney teaches the invention described above, but lacks the teaching of a light lens (diffusing screen –cl. 8, 21, and 22) for designing a main light exit surface molded into the combination of the diode the inserted light-guiding body and the injected layer in an additional injection molding step

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a diffusing screen in order to spread out the light for desired distribution of the light when the element is in use.

In regard to claim 24, Servizawa teaches a light-guiding body, which includes flattened lateral surfaces.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roney in view of Fujita (6,517,213).

Roney teaches the invention described above, but lacks the teaching of a substance admixed to the material of at least one component wherein said substance emits a light of another wavelength when excited by the light emitted from the chip.

Fujita teaches a substance admixed to a material of at least one component (22) wherein said substance emits a light of another wavelength when excited by the light emitted from the chip.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the fluorescent substance mixed in the light guide plate

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taught by Roney in order to alter the color characteristics of the lighting element as desired for aesthetic or design purposes.

Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roney and Servizawa in view of Fujita.

Roney and Servizawa teach the invention described above (including Servizawa's colored diffusing screen 324), but lack the teaching of the light-guiding body defining a first color and said diffusing screen defining a second color such that said first color differs from said second color.

Fujita teaches a fluorescent plate used to change the wavelength of emitted light in a lighting element.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the fluorescent substance (taught by Fujita) mixed in the light guide plate taught by Roney in order to alter the color characteristics of the lighting element as desired for aesthetic or design purposes thus resulting a light guide that is a different color than the diffusing screen (taught by Servizawa).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roney and Servizawa in view of Fujita and further in view of Shih (6,588,923).

Roney, Servizawa, and Fujita teach the invention described above, but lack the teaching of an integrated circuit board.

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Shih teaches an integrated circuit board (col. 1 lines 37-54) with light emitting diodes.

Integrated circuit boards are well known in the art for use with light emitting diodes and It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an IC board in place of Roney's circuit board in order to simplify the circuitry arrangement and reduce the potential for wires being disconnected or crossed.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aoyama (6,250,777), Vilanilam (5,821,695), Szypzak (2004/0070990), Iiyomoto (7,244,924) and Huang (6,461,082) teach relevant lighting devices.

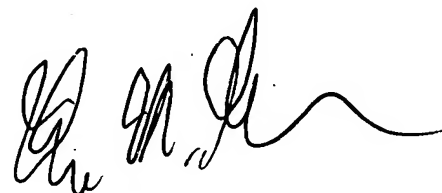
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie A. Shallenberger whose telephone number is (571)272-7131. The examiner can normally be reached on Monday - Friday 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Sember can be reached on 571-272-2381. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAS  
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A handwritten signature in black ink, appearing to read 'T. M. Sember', with a long horizontal flourish extending to the right.

THOMAS M. SEMBER  
PRIMARY PATENT EXAMINER